

Application No.: 10/633,813
Amendment Dated: May 17, 2007

MTS-3216US1

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A substrate for an optical recording medium, comprising:

a plurality of recording tracks formed on a disc; and

an address section comprising first and second address pit sequences formed between said recording tracks along an information reading direction of said recording tracks,

said recording tracks divided into a prescribed number of zones,

each of said recording tracks having a first center line extending along the information reading direction, and

the first and second address pit sequences each having a respective center axis extending along the information reading direction, the first and second address pit sequences being disposed equidistantly from and on opposing sides of a second center line of said address section, the second center line extending along the information reading direction,

wherein in each of said zones, the second center line is shifted in a radial direction of said disc, with respect to the first center line to form a predetermined offset, and said second center line is positioned in extension of said a guide groove contained in each of said recording tracks in which said ~~second~~first center line is provided.

2. (Original) The substrate for an optical recording medium according to claim 1, wherein

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said address section comprises a pair of intermediate addresses located at positions shifted relative to each other in the radial direction of said disc, and

the center of said address section is represented by a center line extending between center axes of said intermediate addresses.

3. (Original) The substrate for an optical recording medium according to claim 1, wherein the direction of shift of the center of said address section is reversed between the shift relative to the radially outermost recording track and the shift relative to the radially innermost recording track in the same zone.

4. (Original) The substrate for an optical recording medium according to claim 3, wherein the amount of shift of the center of said address section decreases continuously or in a steplike manner within said each zone from the radially outermost or innermost portion of said each zone toward the center thereof.

5. (Cancelled).

6. (Original) An optical recording medium comprising a phase change type thin film recording layer formed on an upper surface of the substrate for an optical recording medium as described in any one of claims 1 to 4.

7. (Original) The optical recording medium according to claim 6, wherein said phase change type thin film recording layer is initialized in advance.

8. (Original) A master disc used to produce the substrate for an optical recording medium as described in claim 1, wherein

portions corresponding to said guide grooves and said address section are formed on a glass master disc having a photoresist layer.

9. (Original) The master disc recording apparatus for producing the master disc of claim 8 used to produce the substrate for an optical recording medium, said apparatus comprising:

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a light source for photographically exposing said photoresist layer on said glass master disc;

an optical modulator for optically modulating light of said light source in accordance with an address signal; and

a deflector for deflecting said optically modulated light, wherein;

said deflector is an EO deflector which deflects said optically modulated light in such a manner that (a) in an area for said recording tracks, parallel or wobbled guide grooves are formed, and that (b) in an area for said address section, a beam of said light is shifted in the radial direction of said master disc so that, in said each zone, the center of said address section corresponding at least to the recording track in the radially outermost or radially innermost guide groove shifts in the radial direction of said disc in relative relationship to the center of said recording track in said guide groove.

10.-13. (Cancelled).

14. (Original) A signal generating apparatus, used in the master disc recording apparatus of claim 9, for generating a signal for driving said EO deflector, wherein

said signal generating apparatus supplies said optical modulator with a binary signal corresponding to said address signal, and

supplies said EO deflector with (a) in the case of said recording track area, a voltage for forming parallel or wobbling guide grooves, and (b) in the case of said address section area, a shift voltage for deflecting said optically modulated light in such a manner as to shift said light beam in the radial direction of said master disc so that, in said each zone, the center of said address section corresponding at least to the recording track in the radially outermost or radially innermost guide groove shifts in the radial direction of said disc in relative relationship to the center of said recording track in said guide groove.

15.-18. (Cancelled).

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19. (Previously Presented) A substrate for an optical recording medium, comprising:

a plurality of recording tracks formed on a disc; and

an address section comprising first and second address pit sequences formed between said recording tracks along an information reading direction of said recording tracks,

said recording tracks divided into a prescribed number of zones,

each of said recording tracks having a first center line extending along the information reading direction, and

the first and second address pit sequences each having a respective center axis extending along the information reading direction disposed equidistantly from and on opposing sides of a second center line of said address section, the second center line extending along the information reading direction,

wherein in each of said zones, the second center line is shifted in a radial direction of said disc, with respect to the first center line to form a predetermined offset,

the predetermined offset is a radial shift substantially equal in amount and opposite in direction to a radial shift between third and fourth center lines measured on a calibration substrate,

the third center line defined by a center of an address section on the calibration substrate, and the fourth center line defined by a center line of a recording track on the calibration substrate.

20. (Cancelled).

21. (Currently Amended) A method for producing a substrate for an optical recording medium, having a plurality of recording tracks formed on a disc comprising the steps of:

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(a) forming an address section having first and second address pit sequences between said recording tracks along an information reading direction of said recording tracks,

(b) dividing said recording tracks into a prescribed number of zones, each recording track having a first center line extending along the information reading direction, and

(c) forming the first and second address pit sequences each having a respective center axis extending along the information reading direction, the first and second address pit sequences being disposed equidistantly from and on opposing sides of a second center line of said address section, the second center line extending along the information reading direction and offset from the first center line,

wherein said second center line is positioned in extension of said a guide groove contained in each of said recording tracks in which said second-first center line is provided.

22. (Previously Presented) A method for producing a substrate for an optical recording medium, having a plurality of recording tracks formed on a disc comprising the steps of:

(a) forming an address section having first and second address pit sequences between said recording tracks along an information reading direction of said recording tracks,

(b) dividing said recording tracks into a prescribed number of zones, each recording track having a first center line extending along the information reading direction, and

(c) forming the first and second address pit sequences each having a respective center axis extending along the information reading direction disposed equidistantly from and on opposing sides of a second center line of said address section, the second center line extending along the information reading direction and offset from the first center line,

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(d) determining the amount and direction of the offset using a calibration substrate.

23. (Currently Amended) A method for producing a substrate for an optical recording medium, having a plurality of recording tracks formed on a disc comprising the steps of:

(a) forming an address section having first and second address pit sequences between said recording tracks along an information reading direction of said recording tracks,

(b) dividing said recording tracks into a prescribed number of zones, each recording track having a first center line extending along the information reading direction, and

(c) determining the amount and direction of a calibration offset, and

~~(e)~~(d) forming the first and second address pit sequences each having a respective center axis extending along the information reading direction disposed equidistantly from and on opposing sides of a second center line of said address section, the second center line extending along the information reading direction and offset from the first center line, in the same amount and in opposite direction of the calibration offset

~~(d) — determining the amount and direction of a calibration offset, and~~

~~forming the offset in step (c) of the same amount and in opposite direction of the calibration offset.~~